

duodenal ulcers in older children. The diagnosis of duodenal ulcer is difficult and usually not made. Duodenal ulcer may be successfully treated by operation.

Ulcer of Lesser Curvature of Stomach.—FABER (*Lancet*, January 14, 1922, p. 65) says that gastric ulcer in the corpus of the stomach (on the lesser curvature) is commoner in women than in men. Juxtapyloric ulcer is more frequent in men than in women. Gastric ulcers are chiefly ulcers of the corpus in women, and juxtapyloric ulcers in men. Statistics of postmortem examinations show that gastric ulcer is commoner in women than in men. Ulcer of the corpus may therefore be assumed to be the more frequent variety. On account of their symptoms and course, juxtapyloric ulcers make easier subjects for surgical treatment than ulcers of the corpus. For this reason, statistics of operative material so often show a preponderance of men. Ulcer of the corpus, which might be called the women's ulcer, has a more favorable course than the juxtapyloric. It heals more readily and the raw ulcer found postmortem has more often than the juxtapyloric, the character of a fresh acute ulcer. Ulcer of the corpus often lacks the symptom-complex so characteristic of the juxtapyloric ulcer, especially the late pains and the hypersecretion. This obtains in the case of recent and chronic ulcer of the corpus. We may presume that a large number of ulcers of the corpus as a rule in women make their appearance and get well again without the diagnosis "gastric ulcer" being made.

Neurofibromyxoma Treated by Conservative Operation.—GATCH and RITCHEY (*Ann. Surg.*, 1922, 75, 181) say that various authors believe that benign fibrous or fibromyxomatous tumors of nerve sheaths may undergo malignant degeneration into sarcoma. If the tumor is of long duration, it is not likely to be malignant. The presence or absence of motor or sensory paralysis is a most valuable point. A nerve will withstand a really remarkable amount of stretching or pulling from a benign growth but is quickly destroyed by the infiltration of its substance by a sarcoma. The gross appearance is significant. The encapsulation of the fibrous portion of the tumor and the possibility of shelling the same from the center of a nerve trunk would seem to be strong evidence of a benign growth, as is the lack of encapsulation with fixation of the growth to the contiguous structures strong evidence for sarcoma. The authors feel that microscopical study to the exclusion of other factors is misleading.

Ruptured Spleen.—METCALFE and FLETCHER (*Ann. Surg.*, 1922, 75, 186) say that the healthy spleen may rupture spontaneously or from comparatively slight trauma. The symptoms at first may be slight; some dizziness, nausea or vomiting with restlessness and indefinite abdominal pains or the immediate symptoms may be severe intra-abdominal hemorrhage depending upon this contingency whether the capsule of the spleen has ruptured or remained intact, forming a large subcapsular hematoma. In the authors' cases an agonizing pain was felt in the left shoulder. They feel that it is of value in diagnosis with evidence of hemorrhage. They advocate immediate splenectomy as the only safe treatment.

PEDIATRICS

UNDER THE CHARGE OF

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Studies of Infant Feeding—A Bacteriological Study of the Feces and the Food of Normal Babies Receiving Breast Milk.—BROWN and BOWORTH (*Am. Jour. Dis. Children*, 1922, 23, 243) found that direct smears from the stools of normal breast-fed babies present a practically constant picture, which is characterized by an almost complete dominance of the bifidus group. In this picture cocci and Gram-negative organisms are indistinguishable or are present in very small numbers. This proportion of bacterial types may be changed by abnormal physiologic conditions. A baby who has been on cow's milk formula for several days, although originally breast-fed, may show bacteriologically the effects of this diet even as long as four weeks after the continuous ingestion of breast milk. This is indicated from the smears from the feces by a larger number of cocci and Gram-negative bacilli than is typically found as characteristic of a normal breast-milk stool. If a cow's milk formula is used before the third day after birth, and breast milk is used thereafter, the establishment of fecal types of bacteria follows the course of the normal nursing very closely. From the study of anaerobic cultures it was found that *B. bifidus* is also the dominant living type of organism in the feces of normal breast-fed infants. The proportion of types represented in the direct smears is closely paralleled by the proportion of types growing on anaerobic cultures. Aerobic cultures from the feces of normal nurslings typically showed a predominance of colon-aerogenes groups. This may be lessened by abnormal physiologic conditions. While the study of the fecal flora of infants by anaerobic culture seems to be of great importance, aerobic cultures should also be used as a check to determine the presence of aerobic pathogenic bacteria or of adventitious bacteria. The results obtained from the study of drawn breast milk used for supplementary bottle feedings were inclusive, since no definite relationship could be established between the types of fecal bacteria and the bacteria isolated from the milk. This was made more difficult because the babies had not had a monotonous diet which could be used as a check and because the majority of the organisms isolated from the milk were staphylococci and *B. coli*, which may be isolated from the normal stool. This study emphasized the fact that even a slight amount of handling may introduce types of bacteria into the feedings of a bottle-fed baby which a breast-fed infant would not ordinarily ingest. The study of the stools of normal breast-fed babies has shown that a typical monotonous flora in the feces follows the continuous ingestion of breast milk. From the examination of the breast milk it would seem that staphylococci may be ingested in all cases and that a lactic acid bacillus typical of *B. bifidus* may be frequently present in the milk as it comes from the breast. An important

question arises as to the identity of the bifidus-like bacillus which has been isolated from the breast milk and from the skin around the nipple. They think that it is *B. bifidus* and they believe that this group of organisms which are present in or on the nipples of the mother are an important source of the bifidus organisms found in the nursing's intestinal tract.

The Bacteriology of the Normal Infant's Urine.—HELMHOLTZ and MILLIKIN (*Am. Jour. Dis. Children*, 1922, 23, 309) studied the urine of 75 infants, 35 boys and 35 girls. The results of their studies emphasize the futility of obtaining evidence by the method of Langer and Soldin that in any way will help to settle the problem of the mode of infection in pyelitis. The error that creeps in by contamination, even when all precautions are taken, is such that the evidence obtained is always open to criticism. Their data show that in $\frac{2}{3}$ of the specimens obtained the urine was sterile, and $\frac{1}{3}$ of these observations were made in duplicate. They do not agree with Kleinschmidt that at each catheterization a different flora is obtained, nor with Langer and Soldin that a sterile specimen is only an accident, and that repeated catheterization will always yield bacteria in the urine. Recatheterization was repeatedly done and identical results both with regard to sterility and flora were obtained. They call attention to the types of organisms found by Kleinschmidt and by Langer and Soldin, those of the colon group and *Streptococcus lactiens*, which are all inhabitants of the intestinal canal and not normally present in the urethra as far as can be learned. Kleinschmidt asserts that by taking smears from the meatus after cleansing it he was able to prove the constant presence of an organism of the same type as that found in cultures of the urine. The method used by Langer and Soldin of obtaining cultures is also open to criticism since by washing out the urethra, organisms may be easily washed into the bladder. They found long chains of streptococci, which they believed to have grown from organisms coming from the kidney. The most plausible interpretation is that they were washed in from the urethral opening, and are essentially contaminations, as it is not likely that organisms would grow so rapidly in urine and not grow in more favorable culture media after inoculation. The findings of the authors are at variance with those of both Kleinschmidt and of Langer and Soldin in the frequency of occurrence of *Streptococcus lactiens*, which was always present in their cultures. They found it in only 6 instances, and it may have been present in 5 others, so that at most it was present in 15 per cent of the urines examined. In 6 of 11 instances the *Streptococcus lactiens* was found in the liquid medium and not recovered on the solid medium.

Studies of Infant Feeding: A Bacterio-chemical Study of the Acid Stools Excreted by Breast-fed and Bottle-fed Infants.—BOSWORTH, WILDER, BLANCHARD, BROWN and McCANN (*Am. Jour. Dis. Children*, 1922, 23, 309) describe a method for the distillation of volatile acids from the stools of infants, and also give a graphic method for the study of the nature of the volatile acids, which may be distilled by their technic. Following these procedures they have found that the stools from normal, healthy breast-fed babies are acid in reaction and contain

the volatile acids, formic and acetic. By the same technique they have found that the stools from normal healthy bottle-fed babies are acid, neutral or alkaline in reaction. The acid stools may contain very large amounts of acid and the volatile acid present is acetic acid. *Bacillus aerogenes*, *Micrococcus ovalis*, *Bacillus bifidus* and other unidentified organisms isolated from acid stools possess the power of reducing citrate to a volatile acid. The volatile acid produced by *Bacillus aerogenes*, *Micrococcus ovalis* and other unidentified bacteria was determined to be acetic acid. The volatile acid produced by *Bacillus bifidus* was found to be a mixture of acetic and formic acids. Other organisms like *Bacillus coli*, *Bacillus capsulatus*, *Bacillus acid lactici*, and *Bacillus elongae* disposed of the citrate, producing carbon dioxide and water without the formation of acetic acid. If a synthetic food containing no citrate was fed to an infant, no acetic acid appeared in the stools. If a synthetic food containing a soluble citrate such as sodium citrate was fed, a small amount of acetic acid was found in the stools. If a synthetic food containing an insoluble citrate such as calcium citrate was fed, a large amount of acetic acid was found in the stools. The addition of soluble citrates such as sodium citrate and orange juice to modified milk formulas increased only slightly the acetic acid content of the stools. The addition of an insoluble citrate such as calcium citrate to modified milk formulas resulted in a marked increase in the acetic acid content of the stools. The stools from infants receiving Dryco dry milk contained large amounts of acetic acid. This was probably due to the fact that a considerable portion of the soluble citrate, originally present in the milk, was converted to insoluble citrate during the process of drying.

Potential Heart Disease and Prevention of Organic Heart Disease in Children.—ST. LAWRENCE (*Jour. Am. Med. Assn.*, 1922, 78, 947) studied 65 cases of potential heart disease for an average period of four and a half years. Forty-nine patients or 75 per cent remained free from evidence of cardiac disease during that time. Of 25 patients with acute rheumatic fever in this series, none contracted a lesion in the heart. Of 9 patients with myositis, bone and joint pains, the so-called growing pains and sore throat, none contracted a lesion of the heart. Sixteen patients or 25 per cent contracted a cardiac lesion while under observation. In every case in which a cardiac lesion developed the clinical picture was dominated by chorea in a severe form. No patient developed a cardiac lesion in the absence of this complication. Of 41 patients with chorea in this series 16 or 39 per cent contracted a lesion in the heart. Measures of value in preventing disease of the heart are of greatest benefit when directed against acute rheumatic fever, myositis, bone and joint pains, the so-called growing pains and sore throat. Such measures have little or no value when directed against chorea. In untreated potential cases, acute rheumatic fever is the most important factor concerning disease in the heart. With the exception of mild mitral stenosis, cardiac lesions practically always occur during the active phase of a rheumatic manifestation or a period of pyrexia. In the absence of an active phase, the physical signs in the heart remain unchanged. Evidence of mitral stenosis may not appear for a year or more after the cessation of the rheumatic manifestations. It is there-